Remarks

1. Amended claims 1-3 and original claims 4-6 are present for further consideration.

2. Pages 2 and 3 have been amended to refer to the reference characters.

3. There is no information which would not be cumulative to that which is already present in the application.

4. The various lines of the Abstract have the numbers of words set forth as follows, which together total 147 words:

Line No.	Words	Line No.	Words
1	11	8	12
2	10	9	11
3	10	10	12
4	11	11	10
5	8	12	11
6	9	13	11
7	12	14	8

6,7. Claims 3 has been amended to accurately refer to the embodiment of Fig. 4. Therefore, reconsideration and withdrawal of the -112 rejection is hereby requested.

8,9. Claims 1, 2 and 4-6 are rejected as anticipated by Zhu et al (Zhu). The rejection equates Zhu's Fig. 8 to Fig. 4 herein. The problem is that Zhu's Fig. 8 is disabled during startup and shutdown.

In the middle of paragraph 0050, "the start-up state 106 may allow...the fuel cell stack 16 to come up to its open circuit voltage Voc." This is transition 3 in Fig. 3B; one condition in this transition is that DC/DC enable equal 1, which means that DC/DC is disabled (see transition 1 and the end of paragraph 0052).

In paragraph 0048, it states that the main power converter 12 is not operating during the OFF state. In paragraph 0049, it is stated that the main power converter 12 is disabled during the STANDBY state. In paragraph 0051, it is stated that the main power converter 12 is disabled in the FAULT state. In paragraph 0052, it is stated that the main power converter 12 is disabled during the idle state. Finally, in paragraph 0053, it is stated that "the DC/DC controller 32 to provide PWM signals 46 to the main power converter 12, enabling the main power converter 12 in order to supply power to the load from the fuel

stack 16." Although it is not expressly stated in paragraph 0050 that the main power converter 12 is disabled during the startup state, there is no assertion that it is enabled or operating during the startup state, either. Certainly, it would not be disabled in the standby state, enabled only during the startup state and then disabled during the idle state and enabled during the boost state. There is no reason to suggest that such would be the case.

Reference to Figs. 3B and 3C might indicate that the DC/DC controller is enabled or disabled at various ones of the states. DC/DC is indicated as being disabled after transition to the standby state, to the fault state, and to the idle state, and DC/DC is indicated as being enabled only at the transition into the boost state. Unfortunately, the discourse between paragraphs 0048 and 0053 is not comparable to the limited information set forth in Figs. 3B and 3C. Further, the information in Figs. 3B and 3C is not consistently complete. However, there is no indication either in the referenced paragraphs or Figs. 3B or 3C that the DC/DC converter is enabled other than when in the boost state. Paragraph 0067 indicates that normal operation 72 in Fig. 5 is during the boost state. The current pulsing operation 74 is not relevant to the claimed invention.

Paragraph 0048 indicates that the fuel cell stack 16 is not operating during the OFF state. Paragraph 0050 indicates that the cell stack 16 comes up to open circuit voltage (starts up) during the startup state. There is no description of whether the fuel cell reactants are shut off during a transition from the startup state to the standby state or during a transition from the standby state to the off state. But in either case, the DC/DC main power converter 12 is not operating at any of these times.

Therefore, the only thing taught by Zhu is that the main DC/DC converter 12 is disabled during the off, standby, startup, fault, and idle states, and is operative only during the boost state. It is also clear that the fuel cell is turned on and off within the first three states, OFF, STANDBY and STARTUP. Thus, during the startup and shutdown of the fuel cell, the DC/DC converter 12 is disabled. Claim 1 requires "storage control means operable...during...startup of said fuel cell power plant or (b) shutdown of said fuel cell power plant" which cannot possibly refer to the DC/DC converter 12 in Zhu for the reasons set forth hereinbefore.

Further, claim 1 requires that the "storage control means...extract, in the form of electrical output, energy generated by said fuel cell stack...thereby limiting the maximum average voltage in the fuel cells of said fuel cell stack during said transition." This is not even hinted at in Zhu. The operation of the DC/DC converter 12 is never, not when supplying power to the load, and not when in the pulsing mode, controlled so as to limit maximum average voltage in the fuel cells.

Thus, although Fig. 8 of Zhu is similar to Fig. 4 herein, the invention as a whole (controlling cell voltage during transitions between operating and non-operating) is not even hinted at in Zhu. Furthermore, the device that appears similar is not even operable except when supplying power to a load in Zhu. Therefore, reconsideration and allowance of claims 1, 2 and 4-6 over Zhu is hereby respectfully requested.

Should the foregoing not be persuasive, a telephone call is earnestly solicited.

Respectfully submitted,

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